

# The Effects of Electronic Media on Imagination, Creativity and Empathy

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## Television: Imagination, Creativity and Empathy

- Toddlers exposed to Barney & Friends showed more imagination
- Less aggression, less anger
- More socially appropriate than the control group
- Demonstrated concentration
- Danced along with characters and sang songs or repeated phrases from the dialogue

- Educational programs such as *Barney & Friends* and *Mister Rogers' Neighborhood* include fantasy elements and offer solutions to problems
- In a study of 103 preschoolers, exposure to fantasy programming that presented solutions resulted more realistic and effective solutions than did realistic programming (Miron, 2000)
- Child's age, mother's education and teacher's evaluations of a child's realism in solving problems were significant predictors of originality of their solutions

- Valkenburg et al, 1992 describe fantasy style such as:
  - Positive-intense
  - Aggressive-heroic
  - Dysphoric style
- Results (N = 354 children, grades 2 or 4, three times per year):
  - Children viewing frequency in year one did influence their fantasy styles in year three.
  - Nonviolent children's programs led to an increase in positive-intense fantasy style
  - Violent programs encouraged aggressive heroic fantasy style.
  - Programs with high levels of violence reduce fantasy play.

- Viemeröe & Paajanen (1992) used a questionnaire dealing with fantasy administered to school aged children.
- Amount of TV viewing in general and of violence viewing was associated with measures of fearfulness and of aggressive fantasy
- This held true for dreams about actual TV programs
- Effects were less significant for girls than for boys
- Fantasy was correlated positively with both peer-nominated and self-rated aggression

- Paul Harris (2000) research indicates that identification with characters in his story will influence children's feelings
- Children were asked to involve themselves in a story and to feel sad along with the main character
- In retelling the story, they focused more on the sad elements in the story
- Performed worse on the standard memory task compared to controls who remained detached from the story and their own devices
- Control children were less sad after the story and performed normally on the memory task

- Various strategies have been used by researchers to encourage 2nd and 6th grade children on how to focus on a victim's feelings and think about them as they watch cartoons
- Children who were encouraged to empathize with victims did not find cartoons either funny or enjoyable
- They reported more positive evaluations of the victims
- Less positive reactions to the perpetrators of violence than control group (Nathanson and Cantor, 2000).

- Weiss and Wilson (1996) conducted a content analysis of the five most popular prime-time family sitcoms among children ages 2 to 11.
- Sitcoms featuring child characters emphasized negative emotions such as fear and anger
- Humor was built on “put-downs” sarcastic or downgrading comments accompanying negative emotions
- Humor was artificially enhanced by the laugh track.



- In France, children aged 9-12 in rural and urban areas were asked to imagine what they could be if transformed by a magician
- Drawings were characterized by identification with animals objects on media personalities
- Animals were the most selected theme by girls and boys
- When humans were selected as the identification theme, they stereotypical heroes such as “Superman” (Feuerhahn, 1984/1985)

- Gotz et al, (2003) compared children's fantasies of nature and animals, amusement, travel, supernatural power among other interests in make-believe worlds
- Boys and girls in all countries mention conflict and fighting referring to TV stories
- Boys' fantasies were chiefly concerned with conflict and desire to use magic powers to conquer their foes
- Boys incorporated elements of action/adventure films, computer games, documentary programs and mythical stories where men are heroes into their fantasy stories and drawings.

- In China, children watch 30-minutes of TV a day in smaller cities, while children in larger cities watch TV about 49-minutes a day (Wei, 1996)
- Children use up to 8 different media a day-television the most used
- 2 hours per day were spent on media with rural areas using cassette tapes
- Main emphasis in rural area using TV are
  - Orderliness in family
  - Encouragement of independence
  - Creativity

- Alay Ahmad (1979)--N=94 7-15 year old children in Pakistan
- Most preferred programs were those that were partially fantasy oriented
- Males preferred aggressive themes
- Girls preferred social drama

- West Australia (Peterson, Peterson and Carroll, 1986)
- Examination of imaginative abilities and attitudes in relation to their weekly viewing habits on a test of imaginative problem solving found
  - Heavy viewers (50 hours or more a week) earned lower scores on the test than did light or moderate viewers
  - Attitudes of school children toward imagination on a questionnaire on the nature of imagination were overwhelming favorable and attitudes did not vary with frequency of viewing

- Video Games: Imagination, Creativity and Empathy
- Researchers at University of Indiana Medical School
- Teenagers who had history of exposure to videogame play showed lower activity in the brain's frontal lobes as measured by MRI
- Frontal areas of the brain are generally associated with emotional control and effective planful or attentional focusing
- Investigators have suggested that these results may reflect desensitization to the consequences of violence (Kronenberger et al, 2004; Wang et al, 2002).

- Anderson (2002)
- Practice of shooting or in other ways of harming others carries over from seemingly innocuous gaming into overt actions that can be less helpful to others or actually harmful
- From a statistical standpoint these findings are as powerful as those reported for the many studies of heavy viewing of violent television by children
- The findings are of sufficient magnitude to be considered public health problems of almost the same order as the data on smoking and lung cancer, lead exposure and intellectual deficits, or condom use and the reduction in HIV transmission (Bushman and Huesmann, 2001)

Sales of educational DVDs accounted for 13.1% of total DVD sales in 2004, with 4th quarter sales as high as 16.7% of the total market. Sales of baby videos have tripled over the past 2 years, with annual sales at approximately \$100 million (Toy Industry Monthly, March, 2006)

- Brainy Baby
- Baby Einstein
- Baby Prodigy
- Baby Bumblebee
- Tiny Tot
- Athletic Baby
- BabyPro
- Lots to Learn
- Making Friends Around the World
- CiaoKids



- Benefits of computer games
  - *Marble Madness* for 10-11 year-olds enhance children's visualization skills, their abilities to manipulate physical objects or geometric figures mentally
  - *Concentration* using pictures and icons increased college student's ability to use diagrams and related representations in analyzing electronic circuits
  - *SIMCITY* and *The Oregon Trail* lend themselves of social knowledge
  - Many videogames allow players to modify the rules of the game and learn computer programming.

## Other Games with Positive Benefits

- Game designs include:
- Serious Games Initiative
- The Games for Health Initiative
- Her Interactive
- These companies aim to create more inclusive and innovative games that focus on collaboration, self-esteem, and other non-violent positive goals

## **Promoting Media Education**

- Kathryn Montgomery (2001) promotes media education and identifies constructive play and educational opportunities for children's interactive use of computers
- Websites like American Association of School Librarians that guide parents, teachers or children to useful links for narrative play, reading encouragement and research sites
- Singer & Singer (2001) has a chapter on names of advocacy groups and websites
- PBS and Nickelodean TV have websites that afford opportunity of story telling and games that extend the humor and adventure of these shows.